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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JONAS NILSSON and ANDREAS ROSBERG

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Appeal 2010-010888  
Application 10/584,246  
Technology Center 1700

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Before BRADLEY R. GARRIS, TERRY J. OWENS, and  
RAE LYNN P. GUEST, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

## DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134, Appellants appeal from the Examiner's rejection under 35 U.S.C. § 103(a) of claims 2-23 as unpatentable over JP 399 (JP2001-049399(2001))<sup>1</sup> alone or in view of Uehara (US 5,714,114 (1998)). We have jurisdiction under 35 U.S.C. § 6.

We REVERSE.

Appellants claim a steel alloy comprising a defined composition which contains less than 0.1% by weight copper and exhibits a PRE value greater than 25, wherein PRE = %Cr + 3.3×%Mo+16×%N (claim 17).

Representative claim 17, the sole independent claim on appeal, reads as follows:

17. A steel alloy, comprising:

a composition including (in % by weight):

C	0.40-0.60
Si	0.1-1.0
Mn	0.3-1.0
Cr	12-15
Mo	2.5-4.0
Ni	0-1.0
Co	0-4.0
N	0.15-0.20
Cu	<0.1

balance Fe as well as normally occurring impurities;

a hardness > 56 HRC; and

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<sup>1</sup> Like Appellants and the Examiner, we rely on the English abstract and computer translation of record for an understanding of JP 399.

a value for PRE > 25, wherein PRE = % Cr + 3.3 • % Mo + 16 • % N.

Appellants argue that the applied prior art fails to disclose or render obvious the claim 17 steel alloy having less than 0.1 weight percent copper and a PRE value greater than 25 (Br. 6).

We agree.

The Examiner concedes that JP 399 teaches a steel alloy having a lowermost copper amount of 0.1% but concludes that it would have been obvious to reduce this amount to less than 0.1% as required by claim 17 (Ans. 4, 7). This obviousness conclusion is not without some merit. Nevertheless, the Examiner's position is weakened by the undisputed fact that JP 399 (as well as Uehara) expressly teaches away from a copper amount of less than 0.1% (i.e., because sufficient pitting corrosion resistance cannot be obtained if the copper amount is less than 0.1%).

The Examiner's obviousness conclusion regarding the claim 17 PRE value of greater than 25 is based on the fact that the example 8 steel alloy of JP 399 contains Cr, Mo, and N concentrations which, according to the claim 17 PRE formula, result in a PRE value of 25.3 (*id. at para. bridging 4-5, 9*). As correctly pointed out by Appellants, JP 399 does not recognize PRE as a result-effective variable, and the steel alloy composition of example 8 falls outside the claim 17 composition with respect to, for example, the Mo and Cu claim limitations (Br. 9). Accordingly, the fact that the example 8 alloy possesses by happenstance a PRE value of 25.3 does not support the Examiner's unpatentability position.

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In short, we agree with Appellants that the applied prior art fails to recognize Appellants' discovery that a specific combination of Cr, Mo, and N (*see* the corresponding concentrations and PRE values of claim 17) provides pitting corrosion resistance without the need for a Cu concentration of at least 0.1%, thereby avoiding deterioration in hot working properties of the claimed alloy by keeping the Cu concentration below 0.1% (Br. 8, 9). The absence of such recognition by the applied prior art indicates that the Examiner's obviousness conclusions regarding the above discussed claim 17 limitations are based on impermissible hindsight.

Under these circumstances, we cannot sustain the Examiner's § 103 rejection of claims 2-23 as unpatentable over JP 399 alone or in view of Uehara.

The decision of the Examiner is reversed.

REVERSED

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